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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,435	02/22/2005	Inocencio Higuera Ciapara	73294-010200	3924

7590 01/06/2009

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EXAMINER	
KING, FELICIA C	

ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
01/06/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,435	HIGUERA CIAPARA ET AL.	
	Examiner	Art Unit	
	FELICIA C. KING	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/15/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

2. The disclosure is objected to because of the following informalities: The specification lacks headings for the specific sections.

Appropriate correction is required.

Claim Objections

3. Claims 11-20 are objected to because of the following informalities: Claims 11, 12, 16-20 depend from Claim 1 which is a cancelled claim. Claims 13-15 depend from Claim 3 which is a cancelled claim. For purposes of examination, claims dependent on claim 1 were read as dependent on claim 10; claims dependent on claim 3 were read as dependent on claim 12. Appropriate correction is required.

4. Claim 13 is further objected to because of the following informality: line three of claim 13 reads "0,2mm Hg" which appears to be a typo of "0.2mm Hg". Appropriate correction is required.

5. Claim 18 is further objected to because of the following informality: line two of claim 18 reads "CO2" which appears to be a typo of "CO_2". Appropriate correction is required.

6. Claim 19 is further objected to because of the following informality: line two of claim 19 reads "533,4 mm Hg" which appears to be a typo of "533.4 mm Hg". Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 11-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 11-20 depend from claims that are cancelled. For the purpose of examination, the claim dependency has been interpreted as stated above under 'claim objections'.

9. Claim 12 is further rejected because the step regarding temperature on line 10 of Claim 12 states "-29°C" which is inconsistent with the specification which states the temperature for freeze drying during this point at "29°C". The claim is therefore considered indefinite. The claim has been interpreted as "29°C" which is in line with the ordinary practice of freeze drying and which is recited in the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 10,11,16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevenson (U.S. Patent Number 3,804,959) and further in view of McLachlan (EP 0356 165) and Veltman (U.S. Patent Number 3,501,317).

14. **Regarding Claims 10 and 20**: Stevenson discloses whole frozen shrimp where the shell and head are removed [col.1, lines 40, 43], the shrimp are freeze dried to have moisture content of no more than 10% [col. 5, line 53], the shrimp are rehydrated with water in vacuum chamber of 20 in. Hg (507 mmHg) for up to 48 hours [col. 4, lines 57-61], where the ratio of water to foodstuff is at least 1:1 [col.4, lines 30—32] but does not disclose applying a supercritical solvent such as carbon dioxide to the dehydrated food at a temperature between 36-39°C, at a pressure between 275-345 bar and cooking the shrimp with steam.

15. McLachlan discloses a process for obtaining a low cholesterol food by dehydrating food [page 5, line 7] and applying the supercritical solvent, carbon dioxide, at a temperature between 30°C - 60°C and at a pressure between 50-400 bar [page 6, lines 5-10] and Veltman discloses cooking shrimp with steam [col.1, lines 57-50].

16. At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Stevenson, McLachlan and Veltman before him or her to modify the teachings of Stevenson to include a step for removing cholesterol with a supercritical fluid and cooking with steam because as noted in McLachlan, dehydrating food to levels of 2-8% water alone achieves a high removal of cholesterol [pg.4, lines 3-4] and the product in its dehydrated state enables the supercritical solvent to penetrate and remove lipids and most of the cholesterol [pg.4 lines 26-28]. Carbon dioxide is desirable as a supercritical solvent for foodstuffs because it is nontoxic, and has bacteriostatic properties [pg.2, lines 30-35]. Therefore it would have been obvious to incorporate low water content and the application of a supercritical fluid to further extract

lipids from the dehydrated shrimp material. Regarding cooking the shrimp with steam, Veltman discloses that cooking the shrimp with steam results in minimum weight loss in the shrimp as compared to boiling shrimp [col. 1, lines 22-25, 40-42]. Because the shrimp in the instant claims have already been subjected to dehydration, cholesterol and rehydration it is advantageous to subject the shrimp to further processing that would not further deplete its properties or texture.

17. **Regarding Claim 11**: Stevenson and McLachlan disclose the process of making a low cholesterol shrimp as discussed above but do not explicitly disclose size/count of shrimp. However, Veltman discloses shrimp ranging from 20 -30 count size [col. 2, lines 18-19].

18. At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Stevenson, McLachlan and Veltman to modify the process to include sizes of shrimp because the size can effect the cooking time and cooking temperature [col. 2, lines 16-20].

19. Regarding Claim 16: Further, Stevenson discloses shrimp that are dehydrated to a moisture content of no more than 5% [col. 3, lines 18-20].

20. Regarding Claim 17: McLachlan discloses carbon dioxide as a supercritical solvent [page 6, lines 5-10].

1. **Regarding Claim 18:** McLachlan teaches the supercritical solvent at a range overlapping the instantly claimed range at between 30°C-60°C and at 50-400 bar but does not teach the exact range [page 6, lines 5-10].

2. However, one having ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by McLachlan overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one having ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference. *In re Malagari, 182 USPQ 549, 553.*

21. Regarding Claim 19: Stevenson teaches shrimp rehydrated at under a vacuum of 507 mm Hg for up to 48 hours [col. 4, lines 57-61] which are values near those disclosed in the instant claim. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the time and pressure for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

22. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevenson (U.S. Patent Number 3,804,959) and further in view of McLachlan (EP 0356 165), Veltman (U.S. Patent Number 3,501,317) and Blaine (U.S. Patent Number 2,765,236).

23. Regarding claims 12, 14 and 15: Stevenson, McLachlan, and Veltman disclose the process of making a low cholesterol shrimp as discussed above but do not explicitly disclose a freeze drying process. However, Blaine discloses a freeze drying process where shrimp were introduced to a temperature of - 40°C [col. 3, line75; col. 4, line1] vacuumed at no more than 200 microns of mercury (0.2 mm Hg) [col.5, lines18-19],

where the steps for the time and temperature result in the final water content of the shrimp being 1.2% [col.5, lines 28-29].

24. At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Stevenson, McLachlan, Veltman and Blaine before him or her to modify the process to disclose a temperature and time that could be used to attain a shrimp product having the desired moisture content. The disclosure in Blaine involves a shrimp product that is heated from 25°C to 85°C in an 8 hour period where the internal temperature of the shrimp is between -5°C and 5°C [col.6, lines 16-18] and further dries the shrimp until it reaches a moisture content of no more than 2%. This is in line with the instant claim which aims to have shrimp at a temperature between 5° - 10°C at the end of the about 7 hours and further dries the shrimp where the shrimp reach a moisture content of about 1-5% [Application 10/55435 page. 7, lines 1-15]. It would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the time and temperature for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

25. Regarding Claim 13: Blaine discloses .2mm Hg during the dehydration/freeze drying process as discussed above [col. 5, lines 18-20].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FELICIA C. KING whose telephone number is (571)270-

3733. The examiner can normally be reached on Mon- Thu 7:30 a.m.- 5:00 p.m.; Fri 7:30 a.m. - 4:00 p.m. alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/FELICIA C KING/
Examiner, Art Unit 1794

/JENNIFER MCNEIL/

Supervisory Patent Examiner, Art Unit 1794